METHOD FOR THE PRODUCTION OF ELECTRIC ENERGY AND MHD GENERATOR THEREFOR

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates to power engineering, namely, improvements in generation of electrical energy by magnetohydrodynamics.

Description of Related Art

There is a known method of producing energy (WO 90/00526, 1990, in particular thermal energy, by arranging the motion of water in a predetermined direction in a closed circuit. This method uses unique properties of polar working fluids stipulating a release of energy as a result of hydrogen bonds opening. Besides, a release of kinetic energy along with heat one is noted. However, this method does not allow producing electric energy as suitable for use. A similar method (RU 2124681, 1999) explains ~~of~~ the release of additional energy of said liquid, namely from a combination of cold nuclear fusion and cavitational processes. The additional kinetic energy caused the working fluid to moved at accelerated velocity in the closed circuit. However, this method is not intended for producing electric energy.

Another previous device and method of producing electric energy (SU 753372, 1980) ~~by~~ utilized a method of arranging the motion of ferromagnetic spheroids in a predetermined direction in a closed channel, when voltage produced at the expense of electromagnetic induction is collected by means of electromagnetic windings. This device which implements the method contains a hermetically sealed toroidal channel in which there is a conducting medium as ferromagnetic spheroids and electromagnetic system with windings. The said device and method ~~as~~ has the disadvantage of a low efficiency factor, are rather complex and have low reliability.

A type of generator that create useable electrical energy from moving fluids is the magnetohydrodynamic generator (MHD generator). This method of producing electric energy (RU 2071163, 1996; RU 95110712, 1997) ~~by~~ utilizes arranging the motion of a conducting medium in a predetermined direction in a closed channel when the produced electric energy is collected by means of electromagnetic windings. Ionized gas is issued as a conducting medium. The device which implements the method, a type of MHD generator, contains a closed toroidal channel with a body made of non-magnetic material, inside of which there is a dielectric cover